

## Abstract

In a color image forming apparatus, component color images formed by respective image forming stations are sometimes displaced as they are transferred onto recording paper. Therefore, a set pattern image ( $Q_0$ ) with no displacement at all is recorded onto recording paper as a set pattern image ( $Q_1$ ). In this set pattern image, the centers of auxiliary patterns ( $Y_1$ ,  $C_1$ ,  $M_1$ ) are displaced in an auxiliary scan direction off a referential straight line ( $H$ ) passing through the centers of primary patterns ( $K_1$ ,  $K'_1$ ). The image forming apparatus causes the set pattern image to be read, measures the displacements ( $\Delta Y_1$ ,  $\Delta C_1$ ,  $\Delta M_1$ ) of the auxiliary patterns in the auxiliary scan direction off the referential straight line, and adjusts writing timings in the auxiliary scan direction so that the displacements become 0. As a result, the color image recorded on the recording paper shows improved quality. Therefore, the resist of the component color images can be corrected by measuring the displacements of the component color images without being affected by a tilt of the patterns on the recording paper or irregularity in operation of the image forming stations for recording the component color images.